

MEMORANDUM

TO: Governing Board Members

FROM: Deena Reppen, Deputy Executive Director, Regulatory and Public Affairs

DATE: October 1, 2009

SUBJECT: Florida Power and Light Company's Turkey Point Monitoring Plan Agreement Amendment (Miami-Dade County)

RECOMMENDATION

Staff recommends approval of a Resolution of the Governing Board of the South Florida Water Management District approving the Fifth Supplemental Agreement between Florida Power and Light Company and the South Florida Water Management District for the purpose of governing the rights and obligations of the parties concerning the operation and monitoring of the cooling canal system for Florida Power and Light Company's power generating plant at Turkey Point in Miami-Dade County.

BACKGROUND

Since February 2, 1972 the District and Florida Power and Light Company (FPL) have had an agreement that governs the rights and obligations of both parties with respect to the operation and monitoring of FPL's Turkey Point Power Plant cooling canal system (the CCS). The agreement has had four amendments, the last dated July 15, 1983. FPL has had and continues to have an obligation to "monitor for impacts of the cooling water system on the water resources of the DISTRICT in general and on the DISTRICT's facilities and operations in particular." The purpose of FPL's monitoring since 1972 has been to provide data showing whether or to what extent the Interceptor Ditch System is effective in restricting movement of saline water from the CCS westward of Levee 31E to those amounts which would occur without the existence of the CCS. The previous agreements required FPL to revise its operating criteria for the Interceptor Ditch System and/or implement engineering measures to address any impacts.

On October 29, 2008 the Department of Environmental Protection (DEP) approved the Site Certification for an "Uprate" of FPL's existing Turkey Point Plant Units 3 and 4 (nuclear units). An Uprate increases the power generation of the nuclear units and results in an increased temperature of the water used to cool down the reactors. At Turkey Point, those discharges flow directly into the CCS. The cooling water primarily consists of saltwater from Biscayne Bay that is continuously re-circulated in the CCS. The warmer water causes increased evaporation leaving salts behind, resulting in hypersaline conditions within the CCS.

The concern is that because saltier water is denser than other water, it will “sink” into the groundwater and potentially move vertically and horizontally away from the CCS. This concern may be exacerbated by the Uprate. The monitoring regimen established in 1972 for detecting salt water moving west was reduced by the 1983 agreement amendment.

Current analysis from sources, in addition to the data derived from the 1983 monitoring regimen, indicates movement of CCS water to the west. Through the DEP administrative approval process for the 2008 Uprate, the DEP, the District, and Miami-Dade County consolidated efforts to require FPL to develop a revised and more comprehensive monitoring plan to be incorporated into a fifth amendment to the original 1972 agreement between the District and FPL. The revised monitoring plan requires full delineation of the extent of movement of water from the CCS in groundwater and surface water in all directions, not just westward, and requires monitoring for the CCS’s impacts to surrounding ecology as well.

The revised plan will be made part of the amended agreement between the District and FPL. The agreement and monitoring plan will preserve and improve upon the goals of the prior agreements and will also monitor the potential impacts that the “Uprate” may have on the surrounding natural resources. During the development of the revised monitoring plan, other third parties (private entities, environmental groups and other agencies) have expressed concerns about the potential impacts from the CCS. The monitoring plan has been developed as a first step to not only address agency and third party concerns, but also inform the District as to what remedies, if indicated, might be necessary to protect the water resources of the District in general and the District’s facilities and operations in particular.

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